

Response to Final Office Action dated February 1, 2006
Serial No. 10/624,361 filed on July 22, 2003
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In The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1-21 Cancelled.
- 1 22. (Currently Amended) A method of tilling soil comprising:
 - 2 (a) pulling a seedbed preparation implement in a draft direction;
 - 3 (b) during the step (a), plowing the soil using a plurality of plow shanks
 - 4 mounted on a mainframe of said seedbed preparation implement;
 - 5 (c) during the step (a), cutting and turning the soil using a plurality of
 - 6 rotating discs of a disc gang supported by a main beam, said main beam being pivotally
 - 7 connected with respect to said mainframe, said discs rotating about a common axis that
 - 8 extends at a gang angle relative to a perpendicular to said draft direction, and
 - 9 adjusting said gang angle by moving said disc gang relative to said mainframe, the
 - 10 adjustment being infinite through a designated range of at least 3°, the adjusting step
 - 11 further comprising actuating an actuator extending wholly between said main beam and
 - 12 said mainframe,
 - 13 wherein the adjusting step comprises:
 - 14 i. pivoting a location on said main beam about a vertical axis; and
 - 15 ii. sliding a pin in an elongated slot on said mainframe, said pin disposed at a
 - 16 ~~location outwardly disposed from said a first pivoting location relative to an axis~~
 - 17 ~~extending centrally through said mainframe along said draft direction location~~
 - 18 ~~positioned laterally outwardly from said first pivoting location relative to an axis~~
 - 19 ~~extending centrally and longitudinally through said mainframe along said draft~~
 - 20 ~~direction.~~
 - 1 23. (Original) The method as recited in claim 22, wherein the disc gang angle is
 - 2 infinitely adjustable within at least a range extending from about 5° to about 10°.
 - 1 24. Cancelled.

1 25. Cancelled.

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1 26. (Previously Presented) The method as recited in claim 22, wherein said discs
2 are mounted on a disc support beam that is connected to said main beam and that moves
3 with said main beam during gang angle adjustment, and further comprising raising and
4 lowering said disc support beam relative to said main beam to adjust a cutting depth of
5 said discs.

1 27. (Currently Amended) A method of tilling soil, comprising:

2 (a) pulling a seedbed preparation implement in a draft direction;
3 (b) during the step (a), plowing the soil using a plurality of plow shanks
4 mounted on a mainframe of said seedbed preparation implement;

5 (c) during the step (a), cutting and turning the soil using a plurality of
6 rotating discs of a disc gang, said disc gang including a main beam that is coupled to a
7 front portion of said mainframe, said main beam being angularly offset with respect to
8 said draft direction, and a disc support beam that is located in front of said main beam
9 and that is coupled to said main beam so as to move therewith, wherein said discs are
10 directly connected to said disc support beam and only connected to said main beam via
11 at least one support arm extending between said disc support beam and said main beam,
12 said discs being supported so as to permit said discs to rotate about a common axis that
13 extends at a gang angle relative to a perpendicular to said draft direction; and

14 (d) adjusting said gang angle by actuating an actuator so as to pivot said
15 main beam about a vertical axis and thereby to cause a pin coupled to said main beam to
16 slide along an unsegmented guide in a plate attached to said frame,
17 wherein the adjusting step comprises:

18 i. pivoting a location on said main beam about a vertical axis; and
19 ii. sliding a pin in an elongated slot on said mainframe, said pin disposed at a
20 ~~location outwardly disposed from said a first pivoting location relative to an axis~~
21 ~~extending centrally through said mainframe along said draft direction.~~
22 ~~location positioned laterally outwardly from said first pivoting location relative to an axis~~
23 ~~extending centrally and longitudinally through said mainframe along said draft~~
24 ~~direction.~~

- 1 28. (Original) The method as recited in claim 27, further comprising raising and
- 2 lowering said disc support beam relative to said main beam to adjust a cutting depth of
- 3 said discs.

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- 1 29. (Previously Presented) The method as recited in claim 22, wherein said
- 2 mainframe is directly supported by ground-engaging wheels.
- 1 30. (Previously Presented) The method as recited in claim 22, wherein said
- 2 mainframe is connected between a front disc harrow and a rear disc harrow, the front
- 3 disc harrow comprising the disc gang.
- 1 31. (Previously Presented) The method as recited in claim 22, wherein the disc
- 2 gang is disposed forward of said mainframe with respect to said draft direction.
- 1 32. (Previously Presented) The method as recited in claim 22, wherein said first
- 2 pivoting location is at an inner end portion of the main beam.
- 1 33. (Previously Presented) The method as recited in claim 22, wherein said pin is
- 2 located at an outer end portion of the main beam.
- 1 34. (Previously Presented) The method as recited in claim 27, wherein said
- 2 mainframe further comprises a support structure pivotably connected to the disc gang.
- 1 35. (Previously Presented) The method as recited in claim 27, wherein said
- 2 mainframe is directly supported by ground-engaging wheels.
- 1 36. (Previously Presented) The method as recited in claim 27, wherein said
- 2 mainframe is connected between a front disc harrow and a rear disc harrow, the front
- 3 disc harrow comprising the disc gang.
- 1 37. (Cancelled)
- 1 38. (Cancelled)